

REMARKS

Claims 1-13 are pending in the present application.

Claim 1 is currently amended to clarify the claimed invention.

No new matter is entered as a result of the amendments.

The claims are believed to be allowable for the reasons set forth herein. Notice thereof is respectfully requested.

Claim Rejections - 35 USC § 103

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogino et al. (USPN 6,236,561) in view of Kuwano et al. (USPN 6,235,842) and Hernandez (USPN 4,594,641) or Knecht et al. (USPN 5,640,746) and Hayase et al. (USP 6,686,085) or Kuwano et al. (USPN 6,235,842).

Claim 1 has been amended to specifically recite that the protective resin covers the pre-coat resin where the protective resin encapsulates the anode body. Support for the amendment is provided in paragraph [0026] of the specification.

Ogino et al. is cited as disclosing a method of forming a solid electrolytic capacitor and encapsulating the capacitor element and a portion of the capacitor terminal with a protective resin. As pointed out by the Office, Ogino et al.

fails to disclose expressly applying a pre-coat resin to a portion of the capacitor terminals. Ogino et al. also fails to disclose the pre-coat resin being a lactone resin comprising a butyrolactone and an epoxy resin.

Hernandez is cited as disclosing a pre-coat resin applied to a portion of the capacitor terminals. The pre-coat resin referred to by the Office is actually an adhesive which only serves to secure an insulative polymeric material to the surface of the lead frame for a sufficient amount of time for the insulative material to be heat tacked and press laminated. A multilayer capacitor is then inserted into cavities or recesses in the insulative strip. The adhesive is totally encapsulated after lamination.

Regarding claim 1, Hernandez fails to disclose, or even lead one of skill in the art towards, a pre-coat resin located at the position where the protective resin encapsulates the anode body.

Knecht is also cited as disclosing a pre-coat resin applied to a portion of the capacitor terminals. Knecht is also cited as disclosing a resin which is substantially rigid at ambient temperatures but, the Office fails to even suggest that Knecht

teaches a resin which is flexible above ambient temperatures. Furthermore, Knecht teaches that the interlayer prohibits the thermoplastic shell from contacting the lead frame (col. 3 lines 46-48). This is contrary to the claimed invention wherein only a portion of the lead frame is pre-coated. Furthermore, the interlayer is resistant to high temperatures which is contrary to the claimed requirement that the pre-coat resin be flexible at temperatures above ambient.

The combination of Ogino et al., Hernandez and Knecht would lead one of skill in the art to a capacitor with a pre-coat which is either internal (based on Hernandez) or rigid (based on Knecht). There would be no suggestion from the art to consider a pre-coat which is flexible at temperatures above ambient since this would be contrary to the teachings of Knecht and the property of the resin are not even discussed in the teachings of Hernandez.

The Office admits that the combination of Ogino et al., Hernandez and Knecht fail to disclose a liquid epoxy resin containing butyrolactone. Hayase et al. and Kuwano et al. are cited as disclosing the butyrolactone.

Hayase et al. is specific to a gel electrolyte precursor. In Example 29 butyrolactone is recited as being used in the gel electrolyte. One of skill in the art would have absolutely no motivation for considering the teachings of Hayase et al. when searching for a pre-coat resin for a capacitor. This combination of art can only be made in hindsight based on a desire to find a reference which has a match for a key word without regard for the teachings therein. The entire purpose of the resins in the instant application is to electrically insulate the capacitor while allowing the lead structure to extend therefrom. One of skill in the art would avoid teachings of any material capable of carrying a charge and would therefore certainly eliminate a gel electrolyte as the pre-coat resin. There is no teaching in Hayase et al. of any property of the butyrolactone upon which one could rely to consider utilizing this material in a capacitor pre-coat. The only properties discussed are those of the gel and one would not even consider this material as a pre-coat resin due to the ability to carry a charge.

Kuwano et al. is specific to a phenoxy resin. Throughout the specification additional materials are recited which may be interchangeably used with the phenoxy resin. The Office has

pointed to a recitation of lactones contained within a long list of acceptable solvents none of which are distinguished as having any superior properties to the others. Based on this long list the Office then opines that one of skill in the art would be expected to use a specific solvent with a different resin to achieve a superior result. Applicants respectfully submit that this is a hindsight reconstruction without motivation. One of skill in the art would have no basis for consulting Kuwano et al., and even if they did, they would consider the phenoxy resin to be the critical element since this is required in the teachings. They would have no basis to select an optional resin with a single class of equivalent solvents. Even if one did consult Kuwano et al., based on a hindsight reconstruction, and they ignored the core teachings related to phenoxy resins, they would still be left with a large list of solvents from which to choose without any guidance on which one would be preferable. Therefore, a considerable amount of research would be required and the researcher would have no guidance on how to measure success absent the teachings of the present disclosure.

In summary, Ogina et al. fails to disclose applying a pre-coat resin and fails to disclose a lactone resin as set forth in the claims.

Neither Hernandez nor Knecht recite a pre-coat resin which is flexible at temperatures above ambient, and they fail to provide any guidance as to why one would even consider such a material. Hernandez also fails to recite a pre-coat resin located at the position where the protective resin encapsulates the anode body. Knecht recites a resin which is impervious to chemical and thermal conditions and therefore teaches against a pre-coat resin that is flexible at temperatures above ambient.

The use of Hayase et al. and Kuwano et al. is based solely on hindsight reconstruction relying on the present application for motivation. Even then, one of skill in the art would have no basis for selecting the specific materials recited in the claims except through extensive experimentation. Even with the extensive experimentation, one of skill in the art would have no basis for determining what constitutes success except to match those properties of the claimed invention. Such a hindsight search and examination is an improper basis for a rejection.

For, at least, the reasons set forth herein the rejection of claims 1-13 under 35 U.S.C. 103(a) as being unpatentable over Ogino et al. in view of Kuwano et al. and Hernandez or Knecht et al. and Hayase et al. or Kuwano et al. is improper and withdrawal is respectfully requested.

Double Patenting Rejection

Claims 1-5, 7-8 and 13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 3-9, respectively, of U.S. Patent No. 6,845,004.

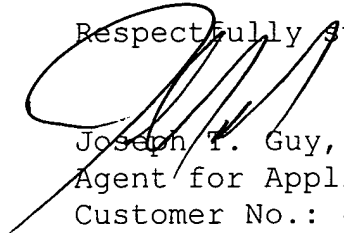
U.S. Pat. No. 6,845,004 was filed as U.S. Pat. Appl. No. 10/365,209 ('209 Appl.). The '209 Appl. was subjected to a restriction requirement between three inventions. Invention I was for claims 1-6 directed to a method of protecting a surface mount capacitor. Invention I was elected and eventually issued as the '004 Patent. Invention III was drawn to a method of manufacturing a solid electrolytic capacitor. Invention III was canceled and refiled as the instant divisional application.

The Office has previously subjected the application to a restriction requirement arguing that the method of protecting a surface mount capacitor and the method of manufacturing a solid electrolytic capacitor are patentably distinct inventions. It is improper to now argue that the inventions are not patentably distinct. This rejection is improper and withdrawal is requested.

CONCLUSIONS

Claims 1-13 are pending in the present application. All claims are believed to be in condition for allowance. Notice thereof is respectfully requested.

Respectfully submitted,


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